

ABSTRACT

These inventions relate to microelectronic molecular descriptor array devices, methods, procedures, and formats for combinatorial selection of intermolecular ligand binding structures and for drug screening. More particularly, those devices and methods rapidly carry out higher order selectivity of combinatorially produced intermolecular ligand binding components, supramolecular structures and supramolecular complexes by application of unique stringency parameters. Preferably, the invention includes the formation of exponential libraries by aggregation of sublibraries through the influence of electronic stringency to influence formation or detection of supramolecular structures or complexes. In addition, this invention relates to microelectronic array devices, procedures, methods and formats for molecular recognition processes, new drug discovery, generation of new affinity reagents, generation of synthetic antibodies, and for immunoassays.